# Storyteller SINESTHESIA Pipe

## Overview

The **Storyteller SINESTHESIA Pipe** is an advanced electronic aromatic device that merges the ritual of pipe smoking with cutting-edge scent technology. Built for passive, fireless scent

interaction, it utilizes ultrasonic evaporation, music-synced emission, color feedback, and breath-based interaction to create a hands-free, immersive olfactory experience.

---

# Design Summary

- **Form Factor**: Compact, oval-based shape resembling a traditional pipe
- **Color**: Matte black with softly curved oval contours
- **Tip Light**: Full-spectrum LED at the pipe tip (color changes with scent)
- **Vapor Port**: Small top-facing opening in the bowl for scent diffusion
- **Material**: Ceramic/polymer composite with natural-feel matte finish
- **Usage Modes**: Handheld or table-top near-nose resting

---

# Core Features

## 1. Ultrasonic Scent Emission

- Piezoelectric transducer evaporates scent compounds using frequencies from 100 kHz to 2.5 MHz
- Supports both carrier-based solutions and carrier-free aromatic molecules
- Capsules (or solution reservoirs) are located inside the pipe bowl

## 2. Music Synchronization (Bluetooth)

- Connects to mobile or desktop audio via Bluetooth
- Analyzes incoming audio (tempo, beat, amplitude)
- Triggers scent pulses in sync with rhythm or dynamic changes

## 3. Color Feedback for Scent Perception

- Tip of the pipe glows in color matched to the active scent or chord
- Enhances perceptibility of scent shifts by linking them to visual cues
- Colors are programmable per scent profile (e.g., blue = mint, amber = oud)

## 4. Breath-Control Activation (Updated)

- **Blow Gesture**: Used to toggle power
    - First blow turns the device **on**
    - Second blow turns the device **off**
    - Mimics lighting and extinguishing a traditional pipe
- **Suction Gesture**: Used to trigger **aroma boost**
    - Gently drawing in from the mouthpiece activates a temporary burst of aroma for 5–10 seconds
    - Enhances the scent output without requiring inhalation into the lungs
    - LED may pulse to indicate boosted mode
- Idle auto-shutoff after 20 minutes

## 5. Passive Nasal Delivery

- No inhalation needed
- Vapor exits through small top-facing hole in the bowl
- Device can rest near the nose or be gently held

## 6. Refill & Capsule Options

- Uses proprietary scent capsules (solid or liquid base)

- Or refillable scent chambers compatible with PG, VG, ethanol, DPG blends
- Each scent tuned to a specific frequency band for precision control

---

## Technical Specifications

- **Piezo Transducer**: Wideband 100 kHz–2.5 MHz, 0.5–3 W
- **Bluetooth Module**: BT 5.0, 10–15m range
- **Microcontroller**: Supports real-time frequency modulation and waveform mixing
- **LED**: RGB full-spectrum light source at tip
- **Battery**: USB-C rechargeable Li-ion, 500–1000 mAh (8–20 hours)
- **Housing Size**: Approx. 10–12 cm long, 3–4 cm diameter at bowl

---

## Use Cases

- **Aromatherapy** (e.g., calm, focus, sleep)
- **Music-enhanced scent exploration**
- **Smoke-free ritual for former smokers**
- **Mood design for meditation, journaling, etc.**

---

## Summary Statement

The Storyteller SINESTHESIA Pipe is a new class of aroma device: ritualistic, programmable, wireless, and musical. Designed to be used hands-free or gently held like a classic pipe, it combines scent precision with emotional resonance — enabling users to *listen* to their scent experience, not just smell it.

---

*Invented by Artur Nugumanov – 2025*